

REMARKS

The Examiner rejected claims 1-8 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement.

The Examiner rejected claims 1, 4-8, and 17-20 under 35 U.S.C. 102 (b) as being anticipated by Stratton et al.

Applicant respectfully traverses the § 112 and 102 (b) rejections with the following arguments:

35 U.S.C. § 112

The Examiner rejected claims 1 and 4-8 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement, asserting “The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.” Applicant respectfully disagrees.

The Examiner has argued that “a subject will always need to be exposed to the proposed training process at the very least to determine if such subject is trainable. With this in mind, the examiner asserts that the applicant fails to provide enabling disclosure that would allow one of skilled in the art to identify or understand the limitation of determining if a subject is trainable with respect to the performance of a given activity.” Applicant respectfully disagrees and asserts that amended claim 1 no longer claims the step of “determining if a subject is trainable with respect to the performance of a given activity”.

Amended claim 1 claims, *inter alia*, “determining for a given activity a point of efficiency of a trainable subject with respect to at least one parameter”. The specification defines trainable as “affected by training”. An example of determining a point of efficiency for a runner on a treadmill can be found in the specification on page 16 line 9 to page 17 line 8 referring to FIG. 4. In this example, a runner runs on the belt of a treadmill and the speed of the treadmill is gradually increased while a parameter (such as heart rate, turnover rate, respiration rate, VO₂, etc.) is measured. A control system determines if the current physical parameter 34B is outside the tolerance function or rate of change. The specification states “If the current physical parameter 34B is not outside the tolerance function, the method returns to step 84 where the treadmill speed 66 is further increased. If the current physical parameter 34B is outside the

tolerance function, then the method continues in step 90. In step 90, the control system 14 records a point of efficiency speed 92, and stores the point of efficiency speed 92 in the memory device 28.”

Amended claim 1 claims, *inter alia*, “training said trainable subject at or near said point of efficiency with respect to a state of accommodation until a state of inefficiency with respect to said at least one parameter or exhaustion occurs”. An example of training a runner at or near a point of efficiency may be had in the specification on page 17 lines 14 to 17, referring to FIG. 5, which state “In step 96, the runner is placed on the treadmill apparatus 12. In step 98, the treadmill speed 66 is set at, or around, the point of efficiency speed 92 which was determined in step 90 (FIG. 4).”

Based on the above arguments Applicant respectfully asserts that claim 1 is in condition for allowance. Since claims 4-8 depend from claim 1, Applicant contends that claims 4-8 are likewise in condition for allowance.

Examiner has rejected claim 8 under 35 USC 112 first paragraph as failing to comply with the enablement requirement. Applicant respectfully disagrees and asserts that the amended claim 8 is in condition for allowance.

Claim 8 as amended, as dependent from claim 1, claims *inter alia*, “determining for a given activity a point of efficiency of a trainable subject with respect to at least one parameter” and “training said trainable subject at or near said point of efficiency with respect to a state of accommodation until a state of inefficiency with respect to said at least one parameter or exhaustion occurs.” Claim 8 claims “The method of claim 1, wherein the subject is selected from the group consisting of an animal, a human, a group of humans, a group of animals, a cellular automata, a group of cellular automata, microbes, plants, and a computer program and data.”

The specification describes training a computer program in the paragraph bridging pages 21 and 22 which states “Another embodiment utilizing the inventive method is for training an adaptive computer program. Similar to the aforementioned bacterial training, the method employed would be to find a resonance point (i.e., the maximum output for a given input) in the system to be trained. The training effect (i.e. output) is maximized for the effort expended by the subject and trainer (i.e., input).”

Applicant respectfully asserts that one of ordinary skill in the art of adaptive computer programs and machine learning (such as in the case of a learning chess program, for example) would know how to determine a resonance point for such a computer program and data.

Based on the above arguments, Applicant respectfully asserts that claim 8 is in condition for allowance.

35 U.S.C. § 102

The Examiner rejected claims 1, 4-8, and 17-20 under 35 U.S.C. 102 (b) as being anticipated by Stratton et al. Applicant respectfully disagrees and contends that the disclosure of Stratton et al. does not teach each and every feature of claims 1, 4-8, and 17-20.

Examiner has asserted “during the exercise the heart rate and blood pressure will always be at a point of efficiency and by slowly changing the speed of the machines the subject are at a constant state of accommodation. A subject is not in state in accommodation only when the exhaustion sets in and the subject is unable to keep up with the workload given by the supine exercise machine.” Applicant respectfully disagrees.

Applicant asserts that Stratton et al. do not teach “determining for a given activity a point of efficiency of a trainable subject with respect to at least one parameter” as claimed, *inter alia*, in claim 1. A state of accommodation is “the value at which the physical parameter does not notably change in variation beyond a given functional tolerance”. See specification page 12, lines 19-22. A point of efficiency is a point beyond which the subject’s body and/or emotions and mind, measured through the body, no longer can accommodate additional stress and enters a state of inefficiency causing the physical parameters to vary differently (e.g., more rapidly change, less rapidly change) than before.” Applicant respectfully asserts that a subject is in a state of accommodation only below a point of efficiency, rather than “only when exhaustion sets in” as asserted by the Examiner. Beyond a point of efficiency, a subject may continue to train for a significant period of time outside of a state of accommodation before exhaustion sets in.

Respectfully, the disclosure of Stratton et al. makes no determination of a point of efficiency for the given exercises, but rather the subjects train at a predetermined percentage of maximum heart rate reserve for 45 minutes (See page 1649, last paragraph, under heading

Training Program and Maximal Oxygen Consumption). Stratton et al. is silent with regard to how such a percentage was derived. Radionuclide studies performed in Stratton et al. were used to determine left ventricular volume of subjects during exercise where the speed of a supine bicycle was increased until the subjects reached exhaustion (See paragraph under Study Protocol). Respectfully, no point of efficiency was determined in this portion of the disclosure of Stratton et al. for any of the parameters measured. In addition, the protocol was identical for all subjects which would be contrary to using individual points of efficiency for training each subject.

Since Stratton et al. do not teach “determining for a given activity a point of efficiency of a trainable subject with respect to at least one parameter”, the disclosure of Stratton et al. is likewise silent with respect to “training said trainable subject at or near said point of efficiency with respect to a state of accommodation until a state of inefficiency with respect to said at least one parameter or exhaustion occurs.” as claimed, *inter alia*, in claim 1. As discussed above, the training in Stratton et al. discloses predetermined heart rate targets for a set period of 45 minutes for all subjects.

Based on the preceding arguments, Applicant respectfully maintains that the disclosure of Stratton et al. does not anticipate claim 1 since Stratton et al. do not teach each and every feature of claim 1, and that claim 1 is in condition for allowance. Since claims 4-8 depend from claim 1, Applicant contends that claims 4-8 are likewise in condition for allowance.

Applicant respectfully contends that Stratton et al. does not anticipate claim 17 because Stratton does not teach each and every feature of claim 17. Claim 17 claims, *inter alia*, “determining an at least one point of efficiency parameter with respect to a state of accommodation by changing the at least one parameter of the performance system until the at

least one parameter of the subject substantially changes beyond a given tolerance function”. As discussed above, the disclosure of Stratton et al. is silent with respect to determining a point of efficiency. Training disclosed by Stratton et al. is based on a fixed time period for all subjects and a predetermined percentage of maximum heart rate (See page 1649, last paragraph, under heading Training Program and Maximal Oxygen Consumption). Exercises used by Stratton et al. for retrieving cardiac images are based on the same bicycle pedal speed for all subjects to the point of exhaustion, far beyond any point of efficiency. Respectfully, the disclosure of Stratton et al. does not disclose determining any point of efficiency and likewise contains no disclosure of training at or near a point of efficiency.

Based on the preceding arguments, Applicant respectfully maintains that Stratton does not anticipate claim 17 and that claim 17 is in condition for allowance. Since claims 18-20 depend from claim 17, Applicant contends that claims 18-20 are likewise in condition for allowance.

CONCLUSION

Based on the preceding arguments, Applicant respectfully believes that all pending claims and the entire application meet the acceptance criteria for allowance and therefore request favorable action. If the Examiner believes that anything further would be helpful to place the application in better condition for allowance, Applicant invites the Examiner to contact Applicant's representative at the telephone number listed below. The Director is hereby authorized to charge and/or credit Deposit Account 19-0513.

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